

NEUTRON BURST TIMING METHOD AND SYSTEM FOR MULTIPLE MEASUREMENT PULSED NEUTRON FORMATION EVALUATION

Abstract

A method is disclosed for measuring neutron interaction properties of an earth formation. The method includes irradiating the formation with bursts of high energy neutrons. The bursts have a duration selected to enable detection of short duration burst related phenomena. After at least one of the bursts, short duration burst related phenomena are measured. After a selected number of the bursts, long duration neutron burst-related phenomena are detected. In some embodiments, the short duration burst related phenomena include at least one of inelastic gamma ray related phenomena, neutron slowing down related phenomena and short capture cross section related phenomena.

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